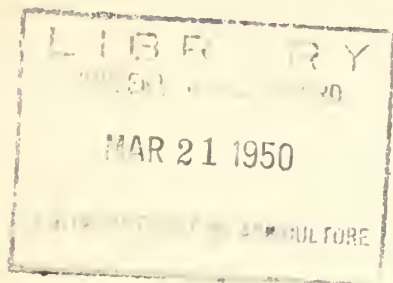


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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
WASHINGTON 25, D. C.



FIELD MEMORANDUM SCS-1120
Supplement A

Re: Guide for the Conduct
of Soil Conservation
Service Drainage
Activities, with Special
Reference to Wildlife

February 24, 1950

TO ALL RANKING FIELD OFFICERS:

FM-SCS-1120 specifically recognizes the need to consider the effects of proposed drainage on wildlife and wildlife habitats. You are reminded of several references to wildlife in FM-SCS-1120, and particularly of item No. 6, page 3, of the Secretary's memorandum of April 2, 1946, to H. H. Bennett (a part of FM-SCS-1120 on drainage) which reads: "6. The Service, when assisting in drainage, will include recommendations for proper safeguards for wildlife and other resources." This supplemental memorandum is to specify the form which consideration of wildlife should take, and to re-emphasize the necessity to consider wildlife wherever the Service is called on to assist farmers and ranchers in soil conservation districts with soil and water conservation operations involving the draining of wet lands.

It should be kept in mind that the Service assists farmers and ranchers in soil conservation districts to plan and apply coordinated programs of soil and water conservation, and to further assist when needed in the work of maintenance. In such assistance drainage should be encouraged only as it contributes to the development of soil and water conservation and sound land use.

The objectives of soil conservation and of wildlife management are, in broad terms, much the same. Good land and water management provides protection to the soil, permanent yields of adaptable crops, and suitable habitats for wildlife. By and large, soil conservation and wildlife conservation complement each other without conflict. In a few limited spheres of activity, however, conflict may develop. One such sphere is drainage of marshes, swamps, and areas of open water.

It must be recognized that there are various types of drainage. This Supplement is not applicable to tile drains and other types of field drainage, to the rehabilitation of old drainage ditches serving cultivated fields and pastures, or improvement of intermittently wet areas of annually cropped land. Wildlife interests are more concerned with the drainage of marshes and swamps or areas of open water that constitute important wildlife habitats.

Wherever drainage affects swamps, marshes, or bodies of open water, it is particularly important that the effect on wildlife be determined. It is the policy of the Soil Conservation Service to consider the effect of proposed conservation drainage operations on habitat conditions of importance to game, furbearers, waterfowl, and other wildlife. Such consideration should take the following form:

1. Careful land capability surveys will serve as the basis for conservation drainage operations. Such surveys will give appropriate recognition to lands of value to wildlife.
2. Plans for drainage will be based on careful engineering surveys, and designs will be developed in accordance with established Service policies. Drainage activities must contribute to the national program of soil and water conservation and proper land use.
3. In determining the practicability of proposed drainage, not only land capability, engineering feasibility, and economic desirability, but effect on wildlife and wildlife habitats will be determined.
4. In order to determine the effect of proposed drainage on wildlife, the Service will use its own technical facilities, and such other facilities as may be needed. The resulting evaluation will be made a part of the plans and recommendations provided to the agency or group that will engage in the actual drainage operations. The governing body of a district will be encouraged to include such evaluation as an integral part of the program of the district.
5. Where the evaluation indicates that the proposed operations will be significantly detrimental to wildlife, we will recommend that advice be obtained from the Fish and Wildlife Service or state wildlife agency before detailed plans are prepared for drainage of swamps, marshes, and areas of open water.

6. It will be the policy of the Service to discourage large-scale drainage of areas that include any considerable extent of peat, particularly highly acid peat and those peats subject to destructive burning after drainage. Such lands while locally useful for special crops, usually are not particularly well suited for the more common general farming crops. They generally are more useful for wildlife habitat than for any other purpose.

It likewise will be the policy of the Service to discourage the drainage of those highly siliceous, light-colored flatwoods sands, including those with organic hardpan or semi-hardpan layers in the subsoil.

Similarly, it will be the policy of the Service to discourage drainage of those flatwoods soils which are normally waterlogged at some seasons of the year and dry and hard at other times. These lands are frequently underlain by impervious clay and are widely distributed in the Gulf Flatwoods region.

Likewise, swamp land and wet land having quicksand close to the surface are probably better suited for wildlife purposes than for general crop production. Large-scale drainage of such land should be discouraged in areas having extensive and uniformly developed quicksand layers where satisfactory and economical installation and maintenance of drainage improvements would be very questionable.

By means of the above guides, it will be possible to present to soil conservation districts, other groups, and individuals receiving assistance in drainage operations, information on the effect of drainage on both the land and wildlife. It will also help to make sure that the district program and work plan will adequately reflect consideration of a proper balance between wildlife and other land-use considerations. Farm conservation plans should give particular attention to improving suitable habitats for wildlife, especially where land use is changed by drainage.

To the end that the Service comply with the intent of this memorandum each region will take immediate steps to provide for proper evaluation of wildlife wherever drainage of swamps, marshes, and areas of open water is proposed, to make such evaluation part of proposed plans, and to fully inform those who will undertake such drainage, of the wildlife values involved.

Some Definitions

Swamp

Swamp consists of low flat land and depressions waterlogged most of the time and sometimes covered with water. Typically, it supports trees as well as shrubs, grasses, mosses, and various mixtures of other plants. Suitability of swamp land for cultivation after drainage depends largely on such characteristics as productivity, susceptibility to reasonable maintenance of favorable drainage, and workability. The soil mostly consists of light-colored sands, impervious heavy clays, acid peats low in calcium and other plant nutrients, and sublayers of quicksand. Generally such lands are not suitable for cultivation, although the heavy clays can frequently be successfully used for some of the more adaptable grasses.

Freshwater Marsh

Flat, treeless land, usually or permanently waterlogged or intermittently covered with water, and characteristically covered with cattails, "reed" grasses, and scattered shrubs. Soil is variable, ranging from muck or mucky peat to sands, mucky loams, and heavy clays. It is usually expensive to drain and to maintain good drainage conditions, and is often suited best to wildlife. The sands and areas with quicksand beneath are not very good for farming.

Freshwater marsh is much less extensive than saltwater marsh. Much or most of it occurs in stream bottoms and along freshwater lakes. It is typically free of salts. In relation to drainage, any dykes that may be needed are much less subject to breakage by storms than in the case of saltwater marsh.

Saltwater Marsh

That portion of the coastal belt normally inundated daily by salt water and prevailingly covered with coarse marsh grasses and weeds. These lands are permanently waterlogged, always salty, and difficult to drain, requiring protection from tidal overflow.

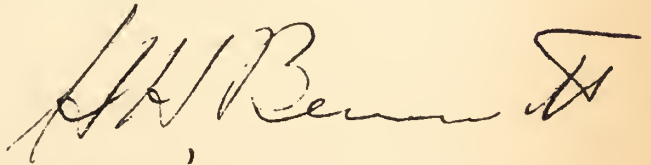
Usually the soil consists of silty clay, heavy clay, muck, and sand. The sand areas are mostly unsuitable for cultivation and much of the other land is normally too expensive for draining and maintenance of good drainage for ordinary agricultural purposes. A very large part of saltwater marsh is best suited to wildlife. These marsh lands vary according to position and exposure in the susceptibility to depth of inundation, especially during storms. Some of the more clayey and mucky areas have been drained and dyked and used for rice, sugar cane, and vegetables. The cost of dyking and draining is high and damage to dykes by storms is of common occurrence. Some areas known as "high marsh" are used for low-grade hay and packing materials, but most of the salt marsh lies too low for profitable draining.

Peat

Peat consists of: (1) granular to well decomposed remains of plants (leaves, twigs, fibrous material, moss, etc.), and (2) fibrous partly decomposed material of the same general class. Contains 65 per cent or more of organic matter. Sometimes mixed with considerable sand, silt, and clay. Usually waterlogged or intermittently covered with water. Normally brownish in color, acid to alkaline, and readily combustible when dry. Mostly covered with grass, but frequently there are scattered bushes. The acid peats are for the most part used best when devoted to wildlife.

Muck

Muck exists under conditions much like those associated with peat land. It contains more mineral matter than peat (from 20 to 65 per cent of well decomposed organic matter, mixed with clay, silt, and sand). It is normally waterlogged but rarely permanently covered with water, and is covered with grass, shrubs, or trees, and with various mixtures of these. It is characteristically black in color, free of salt, and considerably shallower than peat. Muck is better suited to agriculture than peat, having a wider range of crop adaptability.

A handwritten signature in dark ink, appearing to read "A. H. Bennett". The signature is fluid and cursive, with a large, stylized initial "A" and a long, sweeping underline that extends to the right.

Chief

